

Application No.: 10/527,247
Amendment Dated: November 9, 2009
Reply to Advisory Action of: October 13, 2009

MAT-8671US

Remarks/Arguments:

Claims 1, 2 and 4-35 are pending in the application. Claims 21-35 are withdrawn from consideration. Claims 1, 2 and 4-20 are rejected. No claims have been amended.

On page 2, the Advisory Action maintains the rejections of the claims Miki, Moriyama and Shunichi. In response to the arguments made by the Examiner on the Advisory Action, Applicant's representatives requested a telephone interview.

Applicant's representatives would like to thank the Examiner for the telephone interview on November 4, 2009. During the telephone interview, Applicant's representatives explained to the Examiner that the Advisory Action states that "*subcarrier frequencies forming various reception methods*" are not recited in the claims. Applicant's representatives then cited page 2, lines 21-28 and page 4, lines 4-17 in the Remarks where Applicant relies on the recitation of "*carriers*" and not "*subcarriers*" as stated by the Examiner. After reviewing the remarks and the claim, the Examiner agreed that the recitation of "carrier frequencies" is argued in the remarks and not "subcarrier frequencies."

During the telephone interview, the Examiner also stated that he believes Moriyama suggested switching through a plurality of reception communication methods. Specifically, the Examiner stated that Moriyama's switch 93 as shown in Fig. 2 switches between two antennas 91-1 and 91-2. Applicant's representatives then stated that Moriyama's reception communication methods are formed by the same carrier frequency and same demodulation method (both antennas use the same communication reception method). Thus, Moriyama cannot switch between a plurality of reception communication methods.

On page 2, the Official Action rejects claims 1, 5 and 11 under 35 U.S.C. § 103(a) as being unpatentable over Miki (US 5,181,246) in view of Moriyama (US 6,571,090) and further in view of Shunichi (JP 10-327130). It is respectfully submitted, however, that these claims are patentable over the cited art of record for the reasons set forth below.

Applicant's invention, as recited by claim 1, includes features which are neither disclosed nor suggested by the art of record, namely:

... wherein the transmission device is configured to transmit the data repeatedly without changing the transmission communication method during a time period in which a receiving device is configured to switch through a plurality of reception communication methods, each of the plurality of reception communication methods formed by combining one of a plurality of demodulation methods and one of the plurality of carrier frequencies. (Emphasis Added)

Claim 1 relates to a transmitter and receiver that utilize various modulation/demodulation methods and carrier frequencies. Specifically, the transmitter repeatedly transmits the same data without changing the transmission method (maintaining the same modulation method and carrier frequency). During this time period, the receiving device switches through a plurality of reception methods (combines one of a plurality of demodulation methods and carrier frequencies). Support for these features can be at least shown in Fig. 1 and described on pages 22-24 of the specification. No new matter has been added.

In Fig. 2, Moriyama suggests a switch 93 that switches between receiving signals on antennas 91-1 and 91-2. These received signals are then down converted using a set carrier frequency in receiving part 94 and demodulated using a set demodulation method in demodulating part 31. Specifically, Moriyama's receiving part 94 and demodulating part 31 utilize the same carrier frequency and same demodulation method for both antennas 91-1 and 91-2. Moriyama only has one carrier frequency and one demodulation method, and therefore only has one reception communication method.

Furthermore, the first frequency and second frequency recited in Moriyama's col. 9, line 66 to col. 10, line 52 are frequencies for performing switching and sampling (these frequencies are not carriers for performing demodulation). Thus, even though Moriyama can switch between two antennas, the same carrier frequency and demodulation method is utilized for both antennas (Moriyama only teaches one reception communication method).

Applicant's claim 1 is different than the art of record because the transmitter repeatedly transmits data utilizing the same transmission method while the receiver switches through a plurality of demodulation methods and carrier frequencies ("...

wherein the transmission device is configured to transmit the data repeatedly without changing the transmission communication method during a time period in which a receiving device is configured to switch through a plurality of reception communication methods, each of the plurality of reception communication methods formed by combining one of a plurality of demodulation methods and one of the plurality of carrier frequencies").

Shown in Applicant's Fig. 1, transmission device 100 comprises a plurality of modulators 20-24 and a plurality of carrier frequencies 10-13. Similarly, reception device 101 comprises a plurality of demodulators 50 and a plurality of carrier frequencies 40-43. During operation, transmission device 100 selects a modulation method and a carrier frequency to which the data is repeatedly transmitted. The reception device 101 then switches through the plurality of reception methods by combining one of a plurality of demodulation methods and one of a plurality of carrier frequencies.

For example, assuming that the plurality of modulation/demodulation methods are quadrature phase shift keying (QPSK) and quadrature amplitude modulation (QAM), and the plurality of carrier frequencies are 1 MHz and 3 MHz. An example of switching would be as follows. The transmitter may select a modulation method of QAM and a carrier frequency of 3 MHz. The transmitter would then repeatedly transmit data utilizing these parameters. During a time period, the reception device may then switch through a plurality of reception communication methods by combining one of the plurality of demodulation methods and one of the plurality of carrier frequencies. For example, the reception device would switch between the four possible combinations of reception communication methods (QPSK, 1 MHz), (QPSK, 3 MHz), (QAM, 1 MHz) and (QAM, 3 MHz). Thus, the system (as recited by claim 1) switches between the plurality of reception communication methods.

Miki is relied upon for transmitting radio signals utilizing a plurality of carrier frequencies. Shunichi is relied upon for changing modulation methods after a predetermined time. Miki and Shunichi, however, do not make up for the deficiencies of Moriyama with respect to Applicant's claim 1. Thus, claim 1 is patentable over the art of record for at least the reasons set forth above.

Application No.: 10/527,247
Amendment Dated: November 9, 2009
Reply to Advisory Action of: October 13, 2009

MAT-8671US

On page 6, the Official Action rejects claims 2 and 12 under a combination of Moriyama, Miki, Shunichi and Granstrom (US 2005/0215206). Granstrom is relied upon for disclosing a switch of a transmission method. Granstrom, however, does not make up for the deficiencies of Moriyama, Miki, and Shunichi. Thus, claims 2 and 12 are also patentable over the art of record for at least the reasons set forth above with respect to claim 1.

On page 7, the Official Action rejects claims 4, 6-10 and 13-20 under a combination of Moriyama, Miki, Shunichi and Moon (US 7,027,782). Moon is relied upon for a communication device notifying another device of a desirable method for communication. Moon, however, does not make up for the deficiencies of Moriyama, Miki and Shunichi. Thus, claims 4, 6-10 and 13-20 are also patentable over the art of record for at least the reasons set forth above with respect to claim 1.

In view of the amendments and arguments set forth above, the above-identified application is in condition for allowance, which action is respectfully requested.

Respectfully submitted,


Lawrence E. Ashery, Reg. No. 34,515
Attorney for Applicant

RAE/fp

Dated: November 9, 2009

P.O. Box 980
Valley Forge, PA 19482
(610) 407-0700

The Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. **18-0350** of any fees associated with this communication.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:

November 9, 2009 

FP_579168